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APPLICANT : SUMITOMO ELECTRIC IND LTD;

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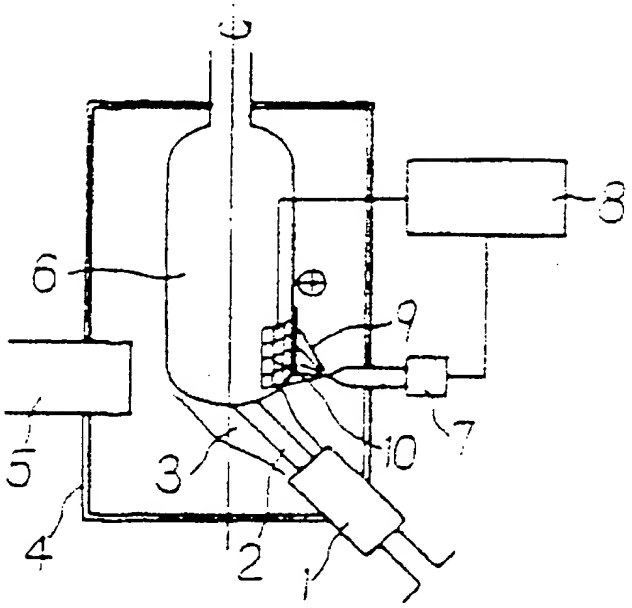
TITLE : PRODUCTION OF POROUS OPTICAL FIBER PREFORM




ABSTRACT : PURPOSE: To efficiently obtain the title preform without cracking by cooling a porous preform with an ion jet generated by a corona discharge, and simultaneously depositing fine glass particles on the preform at the time of producing the porous optical fiber preform by the axis formation in a vapor phase.

CONSTITUTION: A corona-discharge electrode 7 is arranged above a fine glass particle synthesizing burner 1. A glass material and a combustion gas are supplied to the burner 1 to cause a flame hydrolysis reaction, the formed fine glass particles 3 are deposited on the surface of a starting material, and a porous optical fiber preform 6 is obtained. A negative voltage is simultaneously impressed on the corona-discharge electrode 7 and a positive voltage on a wire- mesh electrode 10 from a DC power source 8 to generate a corona discharge between both electrodes, and an ion jet 9 is produced. The porous preform 6 is cooled by the ion jet 9, the fine glass particles are simultaneously deposited, and the preform 6 is produced.